

## *Discussion*

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### **1. Charan Singh**

At the outset I must congratulate David Bloom on such a good paper, which presents a very comprehensive summary of the subject, explains things in a very simple way and provides up-to-date commentary on the literature relating to the links between demography and economic growth. The paper was certainly a pleasure to read and I am sure other central bankers and policy-makers would agree with me. However, being a central banker, I am trained to think differently from David on several issues. Hence, on an excellent paper presented by an exceptional expert I have some comments that I think are basic in nature, and then I will make a few points regarding our experiences in India.

First, the demographic problems of the developed world seem to be different from those of the developing countries. As an illustration, I would cite the participation rate of women in the workforce. In India, according to the census of 2001, the number of female workers per thousand males is merely 559 in rural areas and around 211 in urban areas. In addition, the ratio of women to men in the population itself is adverse, at just around 930 women per thousand men. An adverse sex ratio also prevails in China. This situation is very different from that in developed countries.

Second, the definition of 'old' needs to be dynamic. Acknowledging the considerable disparity between developing and developed countries, average global life expectancy has increased from about 46 years in the 1950s to 65 years in 2000 and is expected to increase to 75 years by 2050. I wonder whether an upward shift in the definition of 'old' is now necessary? Already there is a debate as to when old age begins, with commonly held views ranging from about 50 years in China to 56 years in India and 71 years in France. Is the onset of old age to be measured by age or by ability? And if longevity is increasing, are mandatory retirement ages desirable?

Also related to this is the issue of employer attitudes towards older workers. According to a recent survey (Munnell, Sass and Soto 2006), older workers aged over 55 years in white-collar jobs are considered useful but more costly than younger workers. Another concern is how to treat workers who earn their livelihood doing physical labour.

In many developed countries fertility has also declined below the replacement rate of 2.1 children per woman, implying (in the absence of immigration) that the number of people in successive age cohorts is declining. This phenomenon can permit the elderly to continue to hold jobs for longer as pressure from unemployed youth would not be there, unlike in countries where longevity is rising without the commensurate decline in fertility rates. Thus, there is a compelling case for extending the retirement age in some countries and properly redefining the onset of old age.

Third, most economists are interested in better understanding the determinants of economic growth. In his paper, David cautiously mentions the evidence regarding the relationship between demography and economic growth. I think that it needs

to be interpreted carefully. The predicted relationships certainly find support from the experiences of many countries in east Asia, at least until the late 1990s. But they do not seem to hold in other countries, possibly because other factors were not so conducive for growth. Such factors would include the existence of suitable technology, economic openness, the composition of output, the development of the financial sector, labour laws and other associated socio-economic determinants like health, education and urbanisation. Thus, demography could be an enabling factor for growth, where the demographic dividend is appropriately exploited, but it is not a sufficient factor. India is an illustration of this.

Fourth, I observe a unique and interesting demographic trend: the churning of the world's population through large-scale flows of migrants from the developing to the developed world and an amalgamation of cultures through marriages and business practices. This trend could serve as an important complement to the significant growth in physical trade amongst countries, in which labour-intensive goods move from the developing to the developed countries and capital-intensive goods move the other way. Indeed, I would argue that, either there will be a significant increase in migration or, given the natural resistance to immigration in some countries, a significant increase in outsourcing can be expected. In either case, demographic change is likely to provide further impetus to the growth of capital and financial flows between countries. This implies greater economic integration and should alert policy-makers in both the developed and developing worlds to strengthen surveillance of capital flows. It is also especially important for developing countries to develop their financial markets (focusing particularly on equity and bond market institutions and instruments) to better absorb capital inflows and as a tool for broader economic development.

Fifth, as longevity increases in developing countries, I think that these countries could learn much by looking at the experiences of developed countries that have already undergone large demographic transitions. In Japan, for example, life expectancy at birth has already reached around 82 years. Although cultural and socio-economic factors are obviously important, I presume that its experiences could serve as a useful benchmark for insurance and pension sector reforms in developing countries. In addition, the experiences of developed countries may also provide guidance for developing countries as they attempt to enhance the financial preparedness of their populations for longer periods of retirement, including through expanded financial education programs. With regards to this, it appears likely that the issuance of long-term bonds (such as the 50-year bonds recently issued by France and the United Kingdom) and index-linked bonds (such as the 10-year inflation-linked bonds issued recently by the UK, Germany and Japan) should be considered, as well as public support for the development of annuity markets. The ageing of the population can shift investor emphasis from the accumulation of assets to the preservation, and sometimes even decumulation, of wealth. This could also affect asset prices, for which all market participants need to be prepared.

Sixth, and most importantly, the implications of population ageing for social security systems are serious and must be addressed. Population ageing affects many economic variables, including labour supply, consumption patterns, investment,

cross-border capital flows, fiscal balances and private saving. Martins *et al* (2005) show that where the provision of public pensions increases, then private saving declines. The situation is particularly grim for systems that rely on intergenerational transfers from the young to the old. As Poterba (2004) observes, ‘When a population ages because the existing old live longer, it is challenged to transfer resources to individuals who did not expect to outlive their savings, but did so because of mortality improvements. When a decline in birth rates is the predominant source of population aging, there is more time to prepare for the older population’ (p 4). I think that the role of partnerships between the public and private sectors in areas such as health, education and caring for the elderly needs to be carefully examined. In the case of health, measures should be taken to minimise the fiscal impact of relatively expensive modern medical techniques. In education, private sector involvement could provide significant benefits. Timely action is required as, in some developed countries and many developing countries, the scope for increased public expenditure on health and education seems limited, with public finances already overstretched.

Finally, I think that the decline in birth rates across the world to low and even sub-replacement rates is an important development. Like David, however, I am uncertain about whether this trend will continue into the long-term or whether it is a temporary phenomenon.

## **An Indian perspective**

I will now make a few points specific to India. I would like to mention that India is in the process of a demographic transition from high to low rates of fertility and mortality. The annual growth rate of its population declined from 2.1 per cent over the period 1981–1991 to 1.9 per cent during 1991–2001. According to the latest projections, the population of India will increase from 1 029 million in 2001 to 1 400 million by 2026 – representing an average annual growth rate of 1.2 per cent. The share of working-age individuals (those aged 15–59) in the total population is projected to rise from 57.7 per cent to peak at about 64.3 per cent in 2025–2026. The share of the population aged 60 years and above is projected to increase from 6.9 per cent in 2001 to 12.4 per cent by 2026. In contrast, the proportion of the population aged 0–14 is projected to decline from 35.4 to 23.4 per cent over this period.

Since 1989, India has embarked on a path of pension reforms, accompanied by an extensive process of discussion and policy debate. In 2004, the Indian Government established an independent Pension Fund Regulatory and Development Authority to regulate and develop the private pension market. However, only about 11 per cent of the working population currently participates in mandatory, formal programs designed to provide old-age security. The current coverage of life insurance is also relatively low, at around 10 per cent of the total population. Those in rural areas, who account for three-quarters of the total population, have particularly low participation rates. By global standards, insurance penetration is low in India – life insurance premiums are equivalent to 2.5 per cent of GDP in India, compared with 8.3 per cent in Japan and 4.3 per cent for the world as a whole (Swiss Re 2006). In 1999, the government established the Insurance Regulatory and Development

Authority to regulate, promote and ensure orderly growth of the insurance industry. Since then, competition has intensified, with the number of insurance providers increasing from 1 in 2001 to 15 in 2006.

From the Reserve Bank of India's (RBI) perspective, financial and regulatory issues are of special significance for India in the context of population ageing (Reddy 2001). It is important that savers can choose from a range of institutions and instruments that suit their preferences for risk and return. To facilitate the further development of financial markets, the RBI has been making an effort to maintain low and stable inflation. This should help to anchor inflation expectations and ensure a smooth term structure of interest rates. Also, recent regulatory reforms should foster greater confidence in equity markets and encourage further development of the corporate bond market in order to provide a deep and broadly based market for fixed-income instruments necessary for pension and insurance funds.

In conclusion, population ageing is taking place gradually in India. Learning from the experiences of the developed world, it should be possible for India to develop funded health and pension schemes before the full consequences of population ageing make themselves felt (Mohan 2004). Already, we have taken some measures to strengthen pension reforms and we are making extensive efforts to meet the challenges ahead.

## References

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## 2. Hiroshi Watanabe

I would like to make some comments focusing on the practical policy issues arising from the demographic overview presented by David Bloom.

### Demographic trends in Japan

Due to its declining fertility rate, which reached 1.25 in 2005, Japan's total population has started to decline and its dependency ratio has drastically increased. As explained by David, these demographic trends are typical of the most-developed countries, and as a front-runner Japan has already been addressing the issues raised by these demographic trends.

In Japan, the decline of the working-age population is reducing the total supply of labour and slowing economic growth. In response, it is important for policy to encourage elderly baby boomers to retire later and to increase the participation of women in the labour force. The standard retirement age, as well as the age at which individuals first become eligible for an old-age pension, has already been extended to 65. The age structure of female labour force participation rates in Japan has shown the typical 'M'-shape, with participation rates falling between ages 30–40, reflecting time spent raising children. Recently this M-shape has become milder, so that the age structure of female participation is looking more hump-shaped.

In the longer run, Japan has to consider the potential for migration. Positive efforts have been made to accept specialists and highly skilled workers as migrants. The approach regarding unskilled immigrants remains cautious, with consideration given to social tensions, in part due to the effects it would have on the domestic labour market. It is also important to differentiate between the social impact of short-term foreign workers and permanent migrants.

### Impacts of the demographic change and necessary challenges

In Japan, the large post-World War II baby-boom cohort makes up the demographic peak, and the retirement of this generation will have a considerable impact on our economy, as well as our society.

First, the ageing of this generation will affect the demand for real estate. Their huge demand has boosted the prices of houses and other real estate in the era of rapid growth in Japan, while domestic migration from rural areas to urban areas may have also worked to accelerate demand in urban areas. But such demand has since declined, with adverse implications for the real estate market.

Second, with the retirement of the baby-boom cohort, the household saving rate, which had been more than 10 per cent in Japan, will decline further.

Third, as more people move into old age, medical care costs and pension payments will also increase, making present fiscal policy less sustainable. Among other things, it will be important to secure stable revenues for financing such rapidly increasing

payments. The 'Basic Policies 2006' approved by the Cabinet in July stipulates the consideration of a value-added tax to generate revenues for this purpose.

Fourth, in order to mitigate the impacts of demographic change on economic growth, it is important to maintain and improve upon the level of productivity. Japanese authorities have actively focused on research and development expenditures in the areas of science and technology, as well as enhancing education to better develop human capital resources.

Fifth, demographic change will affect external capital flows. Facing a declining saving rate, Japan welcomes foreign direct investment as a means of boosting economic growth. Accordingly, our initiative of 'Invest Japan' has been announced. On the other hand, in light of a declining rate of return, domestic investors will wish to seek more profitable investment opportunities outside Japan with higher rates of return. The more than 1 400 trillion yen in financial assets held by the Japanese household sector should be channelled to better uses, including in foreign countries.

Finally, demographic change may also affect investors' preferences for different types of financial instruments. The cash flows of pension funds are due to the insurance premiums accumulated by the young and deferred payments to those who are old. Such cash flows correspond closely to those of zero coupon-type bonds already widely used in a number of markets. Hence, I suspect that there is considerable scope for the development of new instruments of this type, which would be favoured in an aged society.

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### 3. General Discussion

The general discussion centred on three main themes: the nature of the relationship between longevity, health and retirement; whether migration and/or fertility policies could mitigate the economic effects of population ageing; and the uncertainties surrounding demographic projections.

Several participants agreed that the relationship between increases in longevity and improvements in health was an important determinant of the effects of population ageing on the macroeconomy. Most agreed that rising longevity had been accompanied by better health of older people, allowing them to work longer. Why this had not led to an increase in retirement ages was a question raised by a number of participants. Some pointed to increases in incomes, which allowed people to take longer periods of retirement while maintaining suitable living standards; this was especially true when starting from a base of only relatively brief retirement spans. Other participants highlighted the role of retirement policies in creating incentives for early retirement, and impeding further rises in retirement age in response to rising life expectancy. For example, one participant suggested that in some countries there was evidence that people on defined contribution schemes were tending to extend their working lives in response to rising longevity, while this was less true of people with defined benefit schemes. A third argument was that labour market rigidities may impede the participation of older workers. David Bloom believed that further cross-country

research comparing different retirement policies could help to shed light on whether policy or shifts in behaviour (in response to higher incomes and longer life spans) have driven observed retirement behaviour.

There was a general consensus that population policies could not substantially mitigate projected changes in the age structure of the population, although migration and fertility policies might feature in a range of policy responses to population ageing. A number of participants observed that the very large increases in immigration necessary for developed countries to leave the population age structure unchanged would be politically infeasible, and raised temporary migration as a more likely alternative. On fertility, it was noted that the literature is inconclusive on how policy might respond to very low levels of fertility, although there is a consensus that family planning initiatives and increased education of young women have been instrumental in reducing fertility rates in developing economies from very high levels. Others argued that because recent demographic trends imply considerable ongoing momentum in the ageing process, any rise in fertility was likely to have a limited effect on elderly dependency ratios in the next few decades while boosting youth dependency ratios.

Several participants were interested in the construction of demographic projections and the degree of uncertainty surrounding various components. David Bloom argued that the migration projections presented in his paper are unlikely to surprise on the upside because existing barriers to labour mobility are unlikely to be reduced in the future. More important are the uncertainties associated with fertility (given the large errors in previous forecasts) and regarding the ongoing upward trends in longevity (which have tended to be under-predicted in the past).